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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,846	11/12/2003	Gregory B. Venema	4430-031234 (03-1257)	6084

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EXAMINER
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MORILLO, JANELLE COMBS

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 03/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/706,846	<b>Applicant(s)</b> VENEMA ET AL.	
	<b>Examiner</b> Janelle Combs-Morillo	<b>Art Unit</b> 1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 January 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 9-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 12-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 22, 2005 has been entered.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-8, 12-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Heymes et al (US 2004/0182483).

Heymes teaches a process of manufacturing an aluminum alloy heat treatable product (such as 2xxx, 6xxx, 7xxx, 7085 [0064]) by casting into an ingot, hot rolling into a plate, machining, solution heat treating said machined stock, quenching (see Heymes at claim 1), controlled stretching, and aging (Heymes at claim 2, 10), substantially as presently claimed in instant claims 1-4, 12-14. Heymes teaches machining into near-net shape (see Examples, Fig. 1).

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Because Heymes teaches a process of working and heat treating identical to the instant process, it is held that Heymes anticipates the instant invention.

Concerning claim 5, Heymes does not specify any special temper for said flat plate product, and therefore teaches said product is in an as-fabricated temper (F-type temper) after hot rolling.

Concerning claims 6-8, Heymes teaches said process can be used to produce a structural element for a wing skin with integrated stiffeners (see[0067]).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-8, 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hunt, Jr et al (US 5, 221,377) in view of "ASM Vol. 4 Heat Treating" p 854.

Hunt teaches a heat treatable Al-Zn (7xxx series) alloy product processed by casting into an ingot (column 5 lines 54-56), working (such as rolling column 5 lines 43-44) and optionally machining (column 5 line 60) to achieve the desired shape- such as a plate (column 5 line 45), solution heat treating (column 5 lines 61-63), stretching (column 6 line 9), and aging (column 6 line 13). Hunt teaches the ingot is "worked (and sometimes machined) into a desired shape" (column 5 lines 59-60), and therefore is held to teach working combined (and followed by) machining.

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“ASM Vol. 4 Heat Treating” further teaches motivation to machine prior to heat treatment. In particular, “ASM Vol. 4 Heat Treating” p 854 teaches-

“another approach to the minimization of residual stresses that is generally successful consists of rough machining to within 3.2 mm (0.125 in. ) or less of finish dimensions, heat treating, and then finish machining. This procedure is intended to reduce the cooling-rate differential between surface and center by reducing thickness; other benefits that accrue if this technique is used to reduce or reverse surface tension stresses in finished parts are improvements in strength, fatigue life, corrosion resistance, and reduced probability of stress-corrosion cracking.”

Therefore, it would have been obvious to one of ordinary skill in the art to perform a step of machining to roughly finish dimensions, as taught by “ASM Vol. 4 Heat Treating”, for the process of forming a heat treatable aluminum alloy taught by Hunt, because “ASM Vol. 4 Heat Treating” teaches said machining prior to solution treating minimizes residual stresses and reduces the cooling rate differential between the surface and center thickness (“ASM Vol. 4 Heat Treating” p 854).

Concerning dependent claims 2-4, 13, and 14, as stated above, Hunt teaches said alloy is an aluminum alloy that is categorized as a 7xxx series type (see Hunt at abstract). Hunt also teaches machining to achieve a desired shape (column 5 line 60), substantially as presently claimed.

Concerning dependent claim 5, Hunt does not specify said alloy is in the “F” temper after rolling. Because the instant specification states that the F temper means the temper of the alloy as fabricated (see [0006]), and because Hunt teaches no additional heat treatment or working steps occur, the product taught by Hunt is also in a F temper after rolling.

Concerning dependent claims 6-8, Hunt teaches said steps are suitable for use in a variety of aircraft components, including wing components, wing box components, wing sections,

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fuselage sections, etc. (column 18 lines 50-53). Therefore the presently claimed skin and stiffening members in the wing panel is held to be within the disclosure of Hunt.


***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janelle Combs-Morillo whose telephone number is (571) 272-1240. The examiner can normally be reached on 8:30 am- 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JCM   
March 27, 2006

  
GEORGE WYSZOMIERSKI  
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GROUP 1700